

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5. (Cancelled).

Claim 6. (Previously Presented) A diversity handover control method in a mobile communication system including a mobile station, a plurality of base stations, and a center connected to said plurality of base stations, said mobile communication system carrying out diversity handover in which said mobile station communicates with said plurality of base stations simultaneously, said diversity handover control method comprising the steps of:

monitoring, at said mobile station, radio condition quality corresponding to a plurality of branches;

selecting, at said mobile station, one or more addition branch candidates based on the monitored radio condition quality;

arranging, at said mobile station, said addition branch candidates in order of the monitored radio condition quality;

notifying, from said mobile station to said center, information on said plurality of branches including said addition branch candidates, said addition branch candidates being notified in the arranged order; and

trying, at said center, to establish one or more communicating branches for the diversity handover by using said notified addition branch candidates in the arranged order.

Claim 7. (Cancelled).

Claim 8. (Previously Presented) A diversity handover control method as claimed in claim 6, further comprising the steps of:

selecting, at said mobile station, one or more deletion branch candidates based on the monitored radio condition quality;

notifying, from said mobile station to said center, information on a plurality of branches including said one or more deletion branch candidates; and

deleting, at said center, one or more communicating branches which are being used for the diversity handover by using said notified deletion branch candidates,

wherein each of said plurality of branches comprises a radio branch between said mobile station and one of said base stations, and a cable branch between one of said base stations and said center, and

when a communicating branch is deleted, a cable branch of the communicating branch is deleted after a radio branch of the communicating branch is deleted.

Claim 9. (Previously Presented) A diversity handover control method as claimed in claim 6, wherein

said plurality of branches include one or more communicating branches,

each of said plurality of branches comprises a radio branch between said mobile station and one of said base stations, and a cable branch between one of said base stations and said center, and

when the sum of the number of communicating branches and the number of addition branch candidates exceeds the maximum number of radio branches which can be established simultaneously, said center tries to establish one or more communicating branches for the diversity handover by using said notified addition branch candidates in the arranged order, up to the maximum number of cable branches which said center can process simultaneously.

Claim 10. (Previously Presented) A diversity handover control method as claimed in claim 9, wherein

said plurality of branches include one or more deletion branch candidates,

said diversity handover control method comprises the step of deleting, at said center, one or more communicating branches which are being used for the diversity handover and correspond to said deletion branch candidates, and

when the sum of the number of communicating branches not including said deleted communicating branches and the number of addition branch candidates exceeds the maximum number of radio branches which can be established simultaneously, said center tries to establish one or more communicating branches for the diversity handover by using said notified addition branch candidates in the arranged order, up to the maximum number of cable branches which said center can process simultaneously.

Claim 11. (Previously Presented) A diversity handover control method in a mobile communication system including a mobile station, a plurality of base stations, and a center connected to said plurality of base stations, said mobile communication system carrying

out diversity handover in which said mobile station communicates with said plurality of base stations simultaneously, said diversity handover control method comprising the steps of:

monitoring, at said mobile station, radio condition quality corresponding to a plurality of branches;

selecting, at said mobile station, one or more addition branch candidates based on the monitored radio condition quality;

obtaining, at said mobile station, a relative value of each of said addition branch candidates indicative of order of precedence to be used for the diversity handover based on the monitored radio condition quality of said addition branch candidates;

notifying, from said mobile station to said center, information on said plurality of branches including said addition branch candidates and their relative values; and

trying, at said center, to establish one or more communicating branches for the diversity handover by using said notified addition branch candidates in the order indicated by their relative values.

Claim 12. (Cancelled).

Claim 13. (Previously Presented) A diversity handover control method as claimed in claim 11, further comprising the steps of:

selecting, at said mobile station, one or more deletion branch candidates based on the monitored radio condition quality;

notifying, from said mobile station to said center, information on a plurality of branches including said one or more deletion branch candidates; and

deleting, at said center, one or more communicating branches which are being used for the diversity handover by using said notified deletion branch candidates,

wherein each of said plurality of branches comprises a radio branch between said mobile station and one of said base stations, and a cable branch between one of said base stations and said center, and

when a communicating branch is deleted, a cable branch of the communicating branch is deleted after a radio branch of the communicating branch is deleted.

Claim 14. (Previously Presented) A diversity handover control method as claimed in claim 11, wherein

said plurality of branches include one or more communicating branches,

each of said plurality of branches comprises a radio branch between said mobile station and one of said base stations, and a cable branch between one of said base stations and said center, and

when the sum of the number of communicating branches and the number of addition branch candidates exceeds the maximum number of radio branches which can be established simultaneously, said center tries to establish one or more communicating branches for the diversity handover by using said notified addition branch candidates in the order indicated by their relative values, up to the maximum number of cable branches which said center can process simultaneously.

Claim 15. (Previously Presented) A diversity handover control method as claimed in claim 14, wherein

said plurality of branches include one or more deletion branch candidates,

said diversity handover control method comprises the step of deleting, at said center, one or more communicating branches which are being used for the diversity handover and correspond to said deletion branch candidates, and

when the sum of the number of communicating branches not including said deleted communicating branches and the number of addition branch candidates exceeds the maximum number of radio branches which can be established simultaneously, said center tries to establish one or more communicating branches for the diversity handover by using said notified addition branch candidates in the order indicated by their relative values, up to the maximum number of cable branches which said center can process simultaneously.

Claim 16. (Previously Presented) A diversity handover control method as claimed in claim 11, further comprising the steps of:

storing, at said center, one or more notified addition branch candidates which are not established in said try to establish the communicating branches for the diversity handover;

selecting, at said mobile station, one or more deletion branch candidates based on the monitored radio condition quality;

autonomously releasing, at said mobile station, communication branches of said deletion branch candidates; and

notifying, from said mobile station to said center, the release of the communication branches,

wherein when said center is notified of the release of the communication branches, said center tries to establish one or more communicating branches for the diversity handover by using said stored addition branch candidates in order indicated by their relative values.

Claims 17-24. (Cancelled).